

## Phosphate Monitoring

### ChemScan® mini LoP - Ascorbic Acid Technical Specification<sup>1</sup>

#### FUNCTIONS AND OUTPUTS

Parameter	PO4 or PO4-P
Measurement Principle	Optical Absorbance
Detector	Photodiode
Spectral Range	880 nm
Calibration Technique	Factory calibrated for – Ascorbic Acid
Number of Parameters	One – Phosphate (See UV- Series ChemScan Analyzers for multiple parameters)
Data Communications	Isolated 4-20 mA Analog (2 outputs available), RS-232
Data Log	10,000 Values Time / Date Stamped
Auto Zeroing	Yes (Standard)
Auto Cleaning Yes (Standard)	
Analyzer Sample Pump	No – Pressurized sample required – See below
Reagent Addition	Yes (Standard), Direct Reagent Injection
Number of Sample Lines	One (See UV- Series ChemScan Analyzers if multiple sample lines are required)

#### PERFORMANCE SPECIFICATIONS

Reading Interval	10 to 9999 minutes
Reaction Time	5 minutes minimum
Range	Phosphate (PO4) 0.01-3.07 mg/L, or (PO4-P) 0.003-1.000 mg/L
Limit of Detection <sup>1,2</sup>	0.0014 mg/L
Accuracy <sup>1,2</sup>	2% of value or 2x detection limit (whichever is greater)
Precision <sup>1,2</sup>	Less than 0.5% of Range

#### SAMPLE PARAMETERS

Sample Pressure	Pressurized Sample Line Required Regulated to 15-70 Kpa (2-10 psi), (Sample extraction accessory available – Pump and Sample Circulation Loop Assembly)
Sample Flow	0.5 to 5.0 l/min. 1.5 L flush per sample (0.13 to 1.32 gpm – 0.4 gallon flush)
Filtration Requirement	None (For samples meeting turbidity and solids requirements)
Strainer Requirement	#20 Mesh - Openings of 0.7 mm (0.03 inches) provided
Sample Temperature	1 <sup>o</sup> - 60 <sup>o</sup> C (34 – 140 <sup>o</sup> F)
Sample Turbidity	0 - 60 NTU (Standard)
Sample Suspended Solids	0 - 150 mg/l TSS

#### MAINTENANCE

Reagent Replacement	As Required (12 weeks typical)
Cleaning Solution Refill	As Required (4 weeks typical)
Peristaltic Mixing Pump Head	Replace after six months of operation
Peristaltic Mixing Pump Replacement	Replace after twelve months of operation
Peristaltic Zeroing/Cleaning Pump Head	Replace after two years of operation

#### INSTRUMENT SPECIFICATIONS

Size	66 cm tall x 24 cm wide x 18 cm deep (26" tall x 9.5" wide x 7" deep)
Weight	12.25 kg (27 lbs)
Mounting	Wall (Standard)
Finish Coating / Material	Fiberglass Reinforced Plastic (FRP)
Power	120-240 VAC ±10%, 50-60 Hz, 70 VA
Power Connection	120 VAC US cord / plug set (Standard) (conduit connection optional)
Power Condition	Dedicated Branch Circuit Free From: Surges/Dips > 10%, RF and Switching Noise
Operator Interface	2 x 20 LCD and 4 x 4 Keypad
Sample Cell Material	Polymer Body with Quartz Windows
Sample Connection	¼" FNPT Fitting
Waste Connection	6 foot length of 5/8" ID clear vinyl tube provided (route to open drain)
Cleaning Solution Container	10 Liters (2.5 gallon) Typical location is on the floor below the analyzer
Reagent Container	4 Liter (1 gallon) Wall-mounted, Epoxy-coated wire rack (provided)

#### OPERATING ENVIRONMENT

Enclosure Ratings	Upper Enclosure: NEMA 4X (Fiberglass Reinforced Plastic) Polyester, Acrylic window Lower Enclosure NEMA 4X (Fiberglass Reinforce Plastic) Polyester
Ambient Temperature	5 - 35 <sup>o</sup> C (41 – 95 <sup>o</sup> F)
Relative Humidity	0 - 100% (Non-Condensing) For installation in an indoor or sheltered location

#### SAFETY APPROVAL

CSA - US

#### Notes:

1. Technical Specifications are subject to change without notice.
2. All performance specifications are based on analysis of water standards under factory conditions.  
Test in Accordance with USA EPA 40 CFR APPENDIX B PART 136  
Test in Accordance with USA EPA SW-846